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SNOW SURVEYS and WATER SUPPLY OUTLOOK for ALASKA



SOIL CONSERVATION SERVICE
U.S. DEPARTMENT OF AGRICULTURE

Cooperating with

ALASKA SOIL CONSERVATION DISTRICT

AS OF
APR. 1, 1980

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

*COVER PHOTO: THE SNOTEL PROJECT CENTRAL COMPUTER FACILITIES IN PORTLAND, OREGON.
THE TERMINAL, PRINTER, COMPUTER AND TAPE DRIVES HAVE NOT COMPLETELY REPLACED THE
SNOW SAMPLING TUBES SEEN IN THE FOREGROUND.*

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, West Technical Service Center, Room 510, 511 N.W. Broadway, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	Room 129, 2221 East Northern Lights Blvd., Anchorage, Alaska 99504
Arizona	Room 3008, Federal Building, 230 N. First Ave., Phoenix, Arizona 85025
Colorado (N. Mex.)	P. O. Box 17107, Denver, Colorado 80217
Idaho	Room 345, 304 N. 8th. St., Boise, Idaho 83702
Montana	P. O. Box 98, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno, Nevada 89505
Oregon	1220 S. W. Third Ave., Portland, Oregon 97204
Utah	4420 Federal Bldg., 125 South State St., Salt Lake City, Utah 84138
Washington	360 U. S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 2440, Casper, Wyoming 82602

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Snow Surveys Branch, California Department of Water Resources, P.O. Box 388, Sacramento, California 95802 --- for British Columbia by the Ministry of the Environment, Water Investigations Branch, Parliament Buildings, Victoria, British Columbia V8V 1X5 --- for Yukon Territory by the Department of Indian and Northern Affairs, Northern Operations Branch, 200 Range Road, Whitehorse, Yukon Territory Y1A 3V1 --- and for Alberta, Saskatchewan, and N.W.T. by the Water Survey of Canada, Inland Waters Branch, 110-12 Avenue S.W., Calgary, Alberta T3C 1A6.



FEDERAL - STATE - PRIVATE
SNOW SURVEYS
AND
WATER SUPPLY OUTLOOK
FOR
ALASKA

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CHECKING SNOW CORE AT INDIAN PASS, NEAR ANCHORAGE

ALASKA SUMMARY

as of

APRIL 1, 1980

March was a very dry month. Only coastal areas west of the Kenai Peninsula received the usual amount of precipitation for the month. Snowfall over most of the interior was half or less the normal increment.

Nevertheless, snowpack in the Chugach and Kenai Mountains remains at maximum of record levels. Heavy volume flows from snowmelt should be expected from all of the streams in the region with mountainous headwaters. The receding heavy mountain snowpack rarely produces flooding by itself but sustains a bank-full flow condition for an extended period. This represents a potential for flooding, should rapid snowmelt precede or coincide with heavy rainfall. The heavy flow period should occur during June for most of the affected areas.

The mountains ringing the lower Susitna Valley - the Alaska Range and the Talkeetnas - are also far above average. Snow in the valley bottoms, however, is generally close to the April 1st average.

Much of the interior has a very light snow cover, by comparison. The low extreme is east of Fairbanks, centered near the Chena River Basin, with a snowpack of only 60% of average.

Snow courses across the state are showing the ravages of wind far in excess of previous years' observations. An asterisk following course names denotes abnormal wind action.

The area summaries are as follows:

KOYUKUK DRAINAGE

Snow in the Brooks Range is above average, being heaviest at the North Slope divide. Bettles is average and Lake Todatonten is well below the average.

UPPER YUKON DRAINAGE

Only two areas of the entire Yukon drainage have above average snow cover. They are the Brooks Range and portions of the extreme Yukon headwaters south of Whitehorse. Snow in the remainder of the Yukon Territory is generally 60 to 95 percent of average. The range within the Yukon Flats is between 75 to 95 percent of average. The Brooks Range has somewhat more snow when compared to the same period last year, while the rest of the Yukon has considerably less.

TANANA-CHENA DRAINAGE

Percentagewise, the Upper Tanana has the most snow. The region around Tok and Delta Junction averages about 15 percent below normal. Snow courses in the Chena River are ranging near the minimum of record. Several are only exceeded by the record low year of 1970. The snowmelt runoff forecast for the Chena River is 52 percent of normal for the April-July period. This is the approximate amount of flow that occurred during the extremely low flow years of 1969, 1970, and 1978.

KUSKOKWIM DRAINAGE

The Upper Kuskokwim drainage appears to be near or slightly above average. This is despite the area receiving very little new snow during March. New snow courses in the region show a widely varying snow cover. A three-fold increase separates the shallowest and deepest snowpacks within an elevation of approximately 1500 feet. In a few years, these courses should greatly enhance the effectiveness of the annual spring break-up flood fighting effort on the Kuskokwim.

NUSHAGAK DRAINAGE

Three new courses are being read on the west side of the Alaska Range in the Mulchatna River headwaters.

COPPER RIVER DRAINAGE

A highly variable snowpack covers the region. The north side of the Chugach Range and eastern Talkeetnas are maximum of record, and the Sanford River course indicates the Wrangells are heavy also. However, the pack tapers off northward across the basin. Some basin floor courses are as much as 20 percent below average. The north side of the basin, including the Alaska Range, has only about half as much snow as last year at this time.

SUSITNA RIVER DRAINAGE

The Upper Susitna snowpack decreases (percentagewise) moving away from the Gulf of Alaska's influence. The Alaska Range has close to an average snowpack at measurable locations, while the Talkeetna tributaries are well above average.

By comparision, more snow (percentagewise) covers the mountains circling the lower Susitna basin. The Peters Hills, not in the shadow of other mountain ranges, is indicative of snowpacks above the valley floor. It is now showing the most snow measured since records began in 1968.

MATANUSKA DRAINAGE

An extremely heavy snowpack covers this region also. Sheep Mountain snow course, near Chickaloon Pass, is more than double the April 1st average and maximum for the 23 years of record. The Independence Mine course, north of Palmer in the Little Susitna drainage, is slightly lower than last year's record depth.

UPPER COOK INLET

Snowmelt run-off in Ship Creek is forecast to be 102,000 acre feet for the April-July period. This is 86 percent above the recent 15 year average and nearly 10 percent more water than flowed in 1977, the previous record year. The snowpack measured near "midway" at the Mt. Alyeska ski resort is now nearly 13 feet deep.

KENAI PENINSULA

This region has the heaviest snow cover in the state. Although the records only extend back ten years, all courses measured maximum-to-date amounts of snow. At Moose Pass, north of Seward, the snowpack water content is nearly three times greater than the ten year average. The Peninsula was one of the few areas in the state that received the usual amount of new snow in March.

PRINCE WILLIAM SOUND

The snow cover in the Valdez area is slightly below the record setting depths measured in 1977; nevertheless, the pack is extremely heavy. The Worthington Glacier course, near Thompson Pass, is 80 percent above an average that includes 23 years of record.

SOUTHEAST

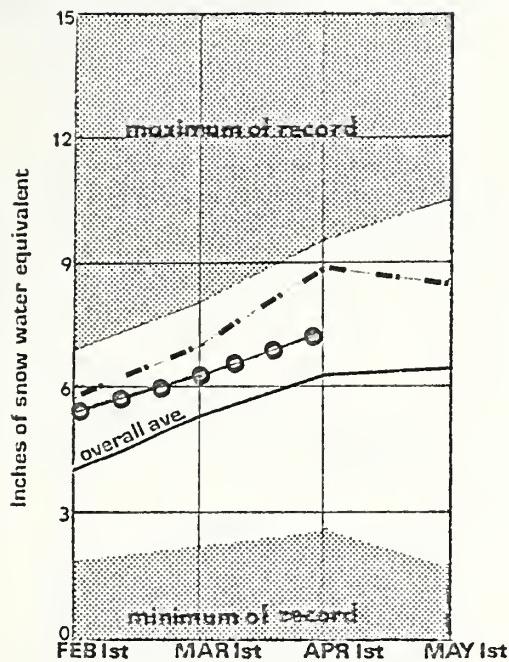
Very little data was reported from this region.

REGIONAL SNOWPACK SUMMARY

UPPER SUSITNA 1/

WATERSHED SNOWPACK

Based on 7 selected snow courses

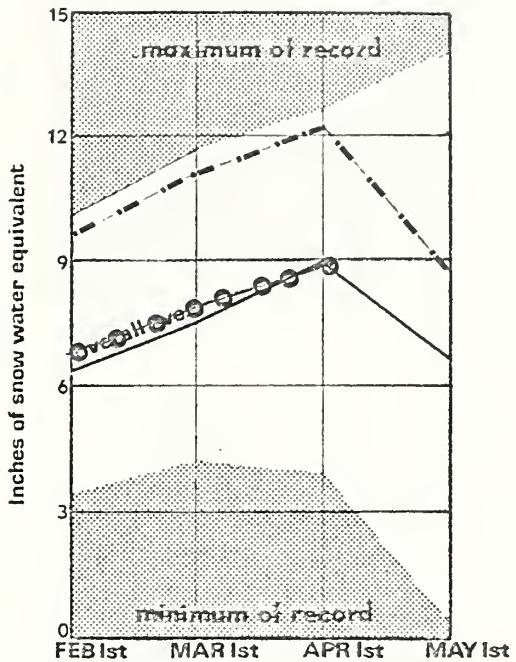


SUMMARY

LOWER SUSITNA 2/

WATERSHED SNOWPACK

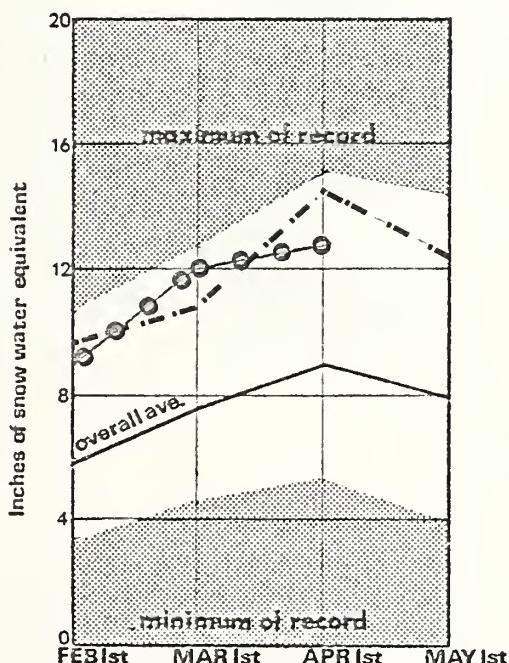
Based on 4 selected snow courses



SHIP CREEK 3/

WATERSHED SNOWPACK

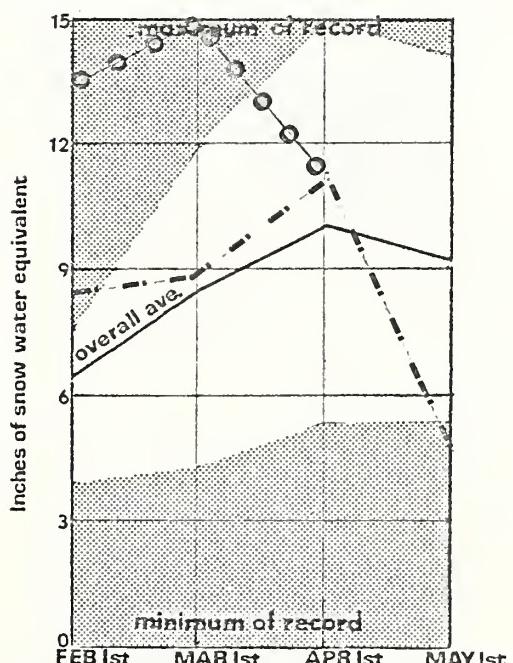
Based on 8 selected snow courses



KENAI PENINSULA 4/

WATERSHED SNOWPACK

Based on 5 selected snow courses



LEGEND

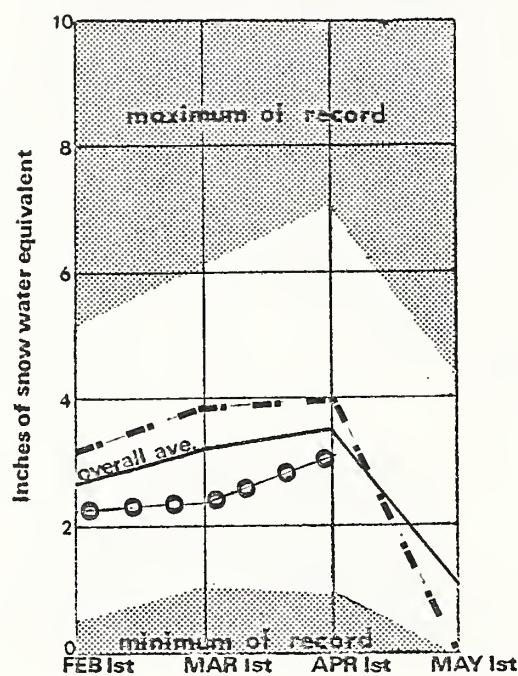
1979 Data
1980 Data

REGIONAL SNOWPACK SUMMARY

TANANA VALLEY^{5/}

WATERSHED SNOWPACK

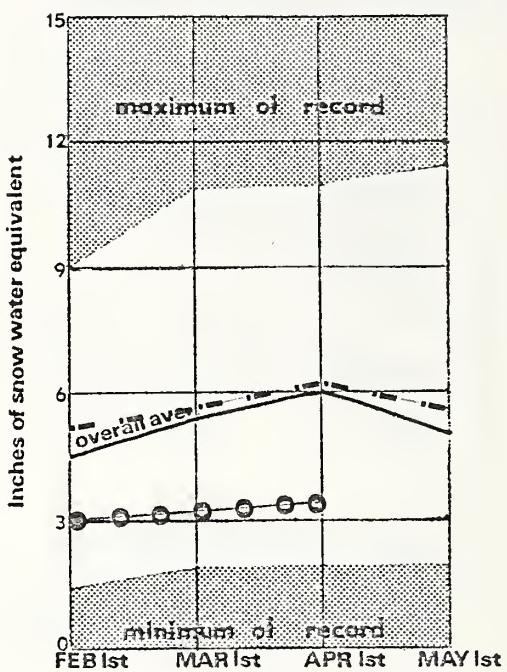
Based on 5 selected snow courses



CHENA RIVER^{6/}

WATERSHED SNOWPACK

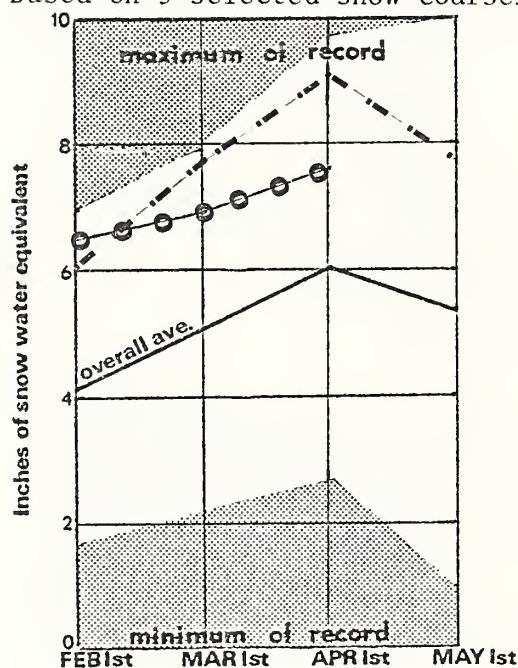
Based on 9 selected snow courses



COPPER RIVER^{7/}

WATERSHED SNOWPACK

Based on 9 selected snow courses



LEGEND

○ 1979 Data
○ 1980 data

- 1/ Upper Susitna
- 2/ Lower Susitna
- 3/ Ship Creek
- 4/ Kenai Peninsula
- 5/ Tanana Valley
- 6/ Chena River
- 7/ Copper River

SUMMARY of SNOW MEASUREMENTS (COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF:	
		Last Year	Average
The following regions have an insufficient amount of data to be charted:			
<u>MARCH 1st</u>			
Valdez Area	3	182	164
Yukon Flats	4	105	103
Eastern Brooks Range	5	126	97
Koyukuk Drainage	7	133	116
Forty-Mile Area	4	57	82
<u>APRIL 1st</u>			
Valdez Area	3	130	150
Yukon Flats	4	86	90
Eastern Brooks Range	5	152	117
Koyukuk Drainage	7	116	102
Forty-Mile Area	4	41	65

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR		PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET
	Thousand Acre Feet	Percent of Average		Last Year 2/
YUKON RIVER at Eagle	30,400	87	Apr-July	42,282
PORCUPINE RIVER at Ft. Yukon	5,900	80	Apr-July	5,020
SALCHA RIVER near Salcha	360	53	Apr-July	777
CHENA RIVER at Fairbanks	270	52	Apr-July	542
LITTLE CHENA R. near Fairbanks	49	56	Apr-July	92
YUKON RIVER at Ruby	56,600	87	Apr-July	NA
SHIP CREEK near Anchorage 1/	102	186	Apr-July	75
SOUTH FORK CAMPBELL CREEK at Canyon Mouth near Anchorage	18.5	150	Apr-July	NA
1/ Measured flow adjusted for diversion				
2/ Provisional data, subject to revision				
+ 1964-1978 period				
* Estimated				

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			LAST YEAR			HISTORICAL AVERAGE		
NAME	Number	Elevation	Date of Survey	Snow Depth (inches)	Water Content (inches)	Snow Depth (inches)	Water Content (inches)	Snow Depth (inches)	Water Content (inches)	Years of Previous Record	
DELAYED MARCH 1 DATA											
COPPER RIVER:											
St. Anne Lake	28	1990	3/10	37	3.9	23	4.2	22	4.3	15	
SUSITNA:											
Lake Louise	29	2400	3/9	26	4.4	23	4.0	21	3.6	15	
Monahan Flats	25	2710	3/9	32	7.2	35	7.8	30	6.3	15	
Oshetna Lake	30	2950	3/9	19	3.1	23	3.8	20	3.3	15	
Willow Airstrip	31	150	3/10	28	5.5	36	9.8	29	6.2	16	
AS OF APRIL 1, 1980											
KOYUKUK DRAINAGE:											
Anaktuvuk Pass	75	2100	N O S U R V E Y	19	3.1	22	4.2	10			
Bettles Field	74	640	3/27	32	7.4	32	6.6	34	7.2	13	
Coldfoot	109	1000	4/2	32	8.5	--	--	31	7.0	8	
Dietrich River	110	1550	4/2	22	4.5	--	--	24	4.6	8	
Lake Todatonten	73	980	3/27	16a	3.4e	32	6.5	27	5.4	12	
Prospect Creek	108	980	4/1	29	6.9	--	--	31	6.6	8	
Table Mountain	111	2200	4/2	70	23.2	--	--	24	4.7	5	
West Buttons	New	1600	3/27	27a	5.5e	19a	2.9e	--	--	--	
YUKON DRAINAGE:											
Arctic Village	78	2300	3/26	22	4.0	17	2.6	21	3.7	16	
Black River	84	650	3/26	17	3.0	24	4.1	23	4.4	15	
Boundary	90	3300	4/2	14a	2.9e	36a	7.6e	25	4.9	12	
Chandalar Lake	76	2040	3/27	22	4.3	19	2.9	22	4.0	14	
Chicken Airstrip?	91	1650	4/2	15	2.6	24	4.4	17	3.0	13	
Circle City	85	600	3/27	21	3.7	35	5.9	25	4.6	14	
Circle Hot Springs	86	869	3/27	20	4.1	--	--	24	5.1	4	
Coleen River	80	1100	3/26	15a	2.9e	--	--	18	3.0	14	
Dempsey Creek	87	950	N O S U R V E Y	--	--	--	--	23	4.3	9	
Eagle Village	89	900	4/2	17	3.3	34	6.7	22	4.5	13	
Five-Mile Camp	106	400	4/1	26	5.7	31	6.0	26	5.3	9	
Fort Yukon	83	430	3/26	14	2.9	26	4.0	20	3.9	13	
Hess Creek	126	1000	4/1	25	5.6	--	--	--	--	--	
Koness Lake	79	1790	3/26	18	3.7	15	2.3	19	3.0	13	
Log Cabin (B.C.)	105	2880	3/29	53	15.0	46	12.6	44	12.9	20	
Mt. Fairplay*	92	3100	4/2	9a	1.5e	32a	6.7e	18	3.6	10	
Nation River	88	3050	4/2	16a	3.5e	43a	9.0e	31	6.6	8	
Squaw Lake	77	2150	3/27	26	5.4	18	2.7	21	3.8	12	
Thirty Mile	107	1300	4/3	40	10.5	39	8.3	37	7.3	6	
Venetie	82	610	3/27	26a	2.9e	--	--	17	3.1	14	
Vundik Lake	81	950	DISCONTINUED:	COURSE DESTROYED BY FIRE							
KUSKOKWIM DRAINAGE:											
Big River Lake *	New	1800	3/27	36	8.9	--	--	--	--	--	
Farewell Lake	70	1090	3/26	19	3.9	12	2.5	17	3.4	13	
Kalitna River (formerly Blackwater Ck.)	New	600	3/27	27	5.9	--	--	--	--	--	
Lake Minchumina	71	730	3/26	21	4.4	23	4.6	22	4.3	13	
McGrath	New	340	3/26	25	5.1	--	--	--	--	--	
Moore Creek	New	950	4/2	40a	9.2e	--	--	--	--	--	
Necons River	New	1050	3/27	19	5.5	--	--	--	--	--	
Purkeypile Mine *	New	2050	3/26	22	4.3	--	--	--	--	--	
Slow Fork *	New	1300	3/26	21	4.2	--	--	--	--	--	
Tatalina Field *	New	850	3/26	30	5.9	--	--	--	--	--	
Towahmina Lake	New	600	3/26	22	4.8	--	--	--	--	--	
NUSHAGAK DRAINAGE:											
Fishtrap Lake	New	1800	3/28	53	12.9	--	--	--	--	--	
Half Cabin Lake	New	1160	3/28	25	5.8	--	--	--	--	--	
Lake Clark	New	275	3/28	34	7.4	--	--	--	--	--	

*Windblown courses

SNOW

DRAINAGE BASIN and or SNOW COURSE			THIS YEAR			LAST YEAR		HISTORICAL AVERAGE +		
NAME	Number	Elevation	Date of Survey	Snow Depth (inches)	Water Content (inches)	Snow Depth (inches)	Water Content (inches)	Snow Depth (inches)	Water Content (inches)	Years of Previous Record
<u>TANANA-CHENA DRAINAGE:</u>										
Big Delta	52	980	3/27	12	2.5	17	3.3	14	2.7	20
Bonanza Creek	66	1150	D E L A Y E D			NO SURVEY		23	4.9	11
Caribou Creek	63	1440	3/28	15	2.9	24	4.6	24	4.3	10
Caribou Mine	55	1115	3/25	20	3.6	29	6.1	27	5.8	14
Caribou Snow Pillow	69	1025	3/28	15	3.4	23	3.7	22	4.6	10
Cleary Summit*	64	2230	3/24	19	4.0	29	6.2	30	6.8	20
Colorado Creek	63	750	3/24	13	1.5	26	4.9	24	5.0	13
Fielding Lake	49	3000	3/27	43	11.7	68	19.6	46	12.1	18
Fort Greely	50	1420	3/27	15	2.9	19	4.5	17	3.6	13
French Creek	53	2010	3/27	17	3.3	31	6.9	29	6.6	18
Granite Creek	51	1240	3/27	15	2.8	19	4.3	16	3.4	12
Haystack Mountain	67	1950	3/28	24	4.6	32	5.6	32	6.6	10
Jack River*	138	2450	3/26	30	6.5	23	4.4	--	--	2
Little Chena Bottom	New	1100	3/25	13	2.5	24	4.8	--	--	2
Little Chena Ridge	62	2200	3/25	20	4.0	29	5.5	27	5.7	18
Little Chena Slope	New	1460	N O S U R V E Y			27	5.0	--	--	2
Little Salcha	54	1500	3/27	15	3.4	31	6.6	25	5.5	18
Lower Chena	59	2000	3/25	22a	4.2e	NO SURVEY		33	8.1	3
Mentasta Pass*	47	2430	3/27	19	3.7	43	11.4	29	6.4	18
Monument Creek	60	1900	3/25	15	2.8	28	5.9	24	5.0	5
Mt. Ryan	61	2750	N O S U R V E Y			NO SURVEY		33	7.5	16
Munson Ridge*	56	3100	3/25	34	9.1	51	15.9	48	13.7	18
Tauchet Creek	57	1640	3/26	17	2.8	27	5.5	23	4.2	6
Tok Junction	46	1650	3/28	17	3.3	22	4.4	18	3.4	20
Totchaket	New	350	3/24	17	2.4	--	--	--	--	--
Upper Chena*	58	3000	3/25	23	4.3	NO SURVEY		37	8.5	10
Upper Chena Pillow	New	2850	3/25	24	4.2	NO SURVEY		--	--	--
Wien Lake	72	1020	N O S U R V E Y			25	5.0	22	4.2	12
Yak Pasture	65	540	3/25	17	3.8	22	3.8	22	4.3	20
<u>COPPER RIVER DRAINAGE:</u>										
Haggard Creek	48	2540	3/28	26	5.7	52	13.3	31	6.6	15
Kenny Lake School	New	1400	3/31	24	5.9	NO SURVEY	--	--	--	--
Little Nelchina	31	4160	4/2	38a	8.9e	37a	8.1e	26	5.4	12
Mankomen Lake	45	3150				NO SURVEY		33	6.8	13
St. Anne Lake*	28	1990	4/2	35	8.9	24	5.0	23	4.8	16
Sanford River	27	2280	4/2	32a	7.8e	36	8.4	25	5.4	13
Tsaina River	35	1500	4/1	76	25.5	56	16.3	53	15.1	8
Worthington Glacier*	36	2400	4/1	108	37.5	72	23.9	63	20.7	22
<u>MATANUSKA-SUSITNA:</u>										
Alexander Lake	18	200	3/25	51	11.4	47	14.1	40	10.6	16
Bald Mountain Lake	23	2150	3/26	40a	11.4e	45a	10.4e	32	7.9	16
Capitol Site	140	860	N O S U R V E Y			42e	11.7e	--	--	2
Chelatna Lake	20	1650	3/25	45a	12.6e	42a	11.4e	41	10.1	14
Chunilna River	137	1750	3/26	61a	17.1e	57a	13.7e	--	--	2
Clearwater Lake*	26	3100	4/2	19	4.2	38a	8.3e	26	5.5	15
Deception Creek	142	1100	N O S U R V E Y			48a	13.7e	--	--	2
Devil's Canyon	124	1350	3/25	48a	13.5e	46a	10.4e	--	--	3
Dutch Hills	New	3100	3/25	94a	35.7e	--	--	--	--	--
Fog Lakes	24	2120	3/28	32a	7.4e	35a	7.4e	28	6.1	10
Independence Mine	33	3300	3/21	84	28.2	105	32.6	67	20.4	13
Kashwitna River Cirque	130	3900	N O S U R V E Y			31a	23.5e	--	--	--
Lake Louise	29	2400	4/2	24	4.7	28	4.5	23	4.4	16
Little Willow Creek	128	2100	N O S U R V E Y			63a	17.0e	--	--	2
Monahan Flats	25	2710	3/26	30	6.9	41	9.1	32	6.8	16
Middle Fork Iron Creek	134	4750	N O S U R V E Y			45a	10.7e	--	--	2
Mt. Bullion	141	1400	N O S U R V E Y			46a	13.3e	--	--	2
Oshetna Lake*	30	2950	4/2	18	4.2	25a	4.5e	20	3.8	16
Peters Hills	21	2010	3/25	63a	21.4e	58a	15.7e	59	15.7	11
Rainbow Lake	136	1350	N O S U R V E Y			54a	12.4e	--	--	2
Ramsdyke Creek	New	2100	3/25	74a	26.6e	--	--	--	--	--
Sheep Creek Cirque	131	3000	N O S U R V E Y			NO SURVEY	--	--	--	2

*Windblown courses

a - aerial marker reading

e - estimated

+ FOR PERIOD OF RECORD

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			LAST YEAR			HISTORICAL AVERAGE +		
NAME	Number	Elevation	Date of Survey	Snow Depth (inches)	Water Content (inches)	Snow Depth (inches)	Water Content (inches)	Snow Depth (inches)	Water Content (inches)	Years of Previous Record	
<u>MATANUSKA-SUSITNA, Continued:</u>											
Sheep Mountain	34	2900	3/31	43	12.0	38	8.2	26	5.6	8	
Sheep River	132	4100	N O	S U R V E Y	50a	11.5e	--	--	--	2	
Skwentna	19	160	3/25	44	11.1	48	14.3	40	10.2	7	
Talkeetna	22	350	3/25	29	6.5	36	8.5	32	8.0	13	
Talkeetna River	135	2250	N O	S U R V E Y	33a	6.9e	--	--	--	2	
Talkeetna River Pass	133	5100	N O	S U R V E Y	40a	8.8e	--	--	--	2	
Upper Kashwitna River	130	4300	N O	S U R V E Y	57a	13.1e	--	--	--	2	
Willow Airstrip	32	150	3/25	27	6.0	42	11.4	29	6.8	15	
<u>UPPER COOK INLET:</u>											
Arctic Ski Bowl*	5	3000	3/31	49	19.3	62	23.0	40	12.8	16	
Arctic Valley #1	1	500	3/31	03	1.7	19	5.4	12	2.7	16	
Arctic Valley #2	2	1000	3/31	18	5.1	26	6.4	14	3.1	16	
Arctic Valley #3	3	2030	3/31	32	9.0	45	11.7	26	6.1	16	
Arctic Valley #4*	4	2330	3/31	31	8.1	46	12.4	27	6.7	16	
Bird Creek*	8	2350	3/28	72	30.5	67	20.8	54	17.0	13	
Eagle's Nest*	New	4050	3/28	89	35.6	--	--	--	--	--	
Gravel Bar	New	3200	3/28	87	36.1	--	--	--	--	--	
Indian Pass	7	2350	3/28	90	33.9	95	32.5	69	21.9	13	
McArthur	17	120	3/25	100a	37.0e	68	23.1	64	19.2	16	
Mt. Alyeska	10	1200	3/30	152	58.0	106	35.8	--	37.9	7	
North Fork Ship Creek	New	3600	N O	S U R V E Y	--	--	--	--	--	--	
Raven Ridge	New	1200	3/28	48	15.5	--	--	--	--	--	
Ship Creek	6	1750	3/28	56	17.2	57	15.5	40	10.9	13	
South Fork Campbell Creek	9	1200	3/28	28	7.0	35	9.7	28	7.6	7	
<u>PRINCE WILLIAM SOUND:</u>											
Lowe River	37	550	4/1	66	23.4	57	18.2	53	15.6	8	
Valdez	38	50	4/1	58	21.1	60	20.9	58	18.4	8	
<u>KENAI PENINSULA:</u>											
Bertha Creek	11	850	3/27	83	28.5	59	17.2	52	15.7	10	
Bradley Cirque	New	3350	N O	S U R V E Y	88	36.5	--	--	--	2	
Bridge Creek, Lower	16	1100	3/28	83	28.5	45	13.9	44	12.9	8	
Bridge Creek, Upper	15	1300	3/31	73	20.1	46	13.3	45	13.3	8	
Demonstration Forest	147	770	3/31	56	16.5	31	9.9	33	9.0	4	
Fox Creek	145	1500	3/29	54	17.1	42	11.4	--	--	2	
Jean Lake	14	620	3/28	18	5.9	14	4.1	14	3.6	10	
Kenai Moose Pens	New	300	3/27	14	4.2	--	--	--	--	--	
Kenai Summit	12	1390	3/27	70	23.9	50	14.2	43	12.3	10	
Moose Pass	13	700	3/27	45	16.8	22	7.3	21	5.9	10	
Pass Creek	144	1200	3/29	52	17.0	39	10.6	--	--	2	
Portage Valley	New	50	3/28	56	24.1	--	--	--	--	2	
Ptarmigan Hills	New	1200	N O	S U R V E Y	52	17.7	--	--	--	--	
(formerly Ptarmigan Landing)											
Resurrection Pass	146	2250	3/29	61	22.8	44	13.0	--	--	2	
Windy River	New	950	4/2	76a	26.5e	--	--	--	--	--	
<u>SOUTHEAST ALASKA:</u>											
Cropley Lake	94	1650	D E L A Y E D			89	37.3	--	--	3	
Eagle Crest	95	1000	D E L A Y E D			63	27.8	--	--	3	
Fish Creek	96	500	D E L A Y E D			30	10.0	17	5.5	4	
Hunt Saddle	103	1500	D E L A Y E D			N O SURVEY	126	55.4	3		
Lake Shore	104	660	D E L A Y E D			N O SURVEY	81	34.7	3		
Pet Ridge, North	New	1600	D E L A Y E D			83	37.8	--	--	2	
Pet Ridge, South	New	1650	D E L A Y E D			78	33.4	--	--	2	
Petersburg Reservoir	99	550	D E L A Y E D			42	15.1	--	--	2	
Speel River	98	280	3/31	70	26.6	74	30.7	87	35.0	15	
*Windblown courses a - aerial marker reading e - estimated											

+ FOR PERIOD OF RECORD

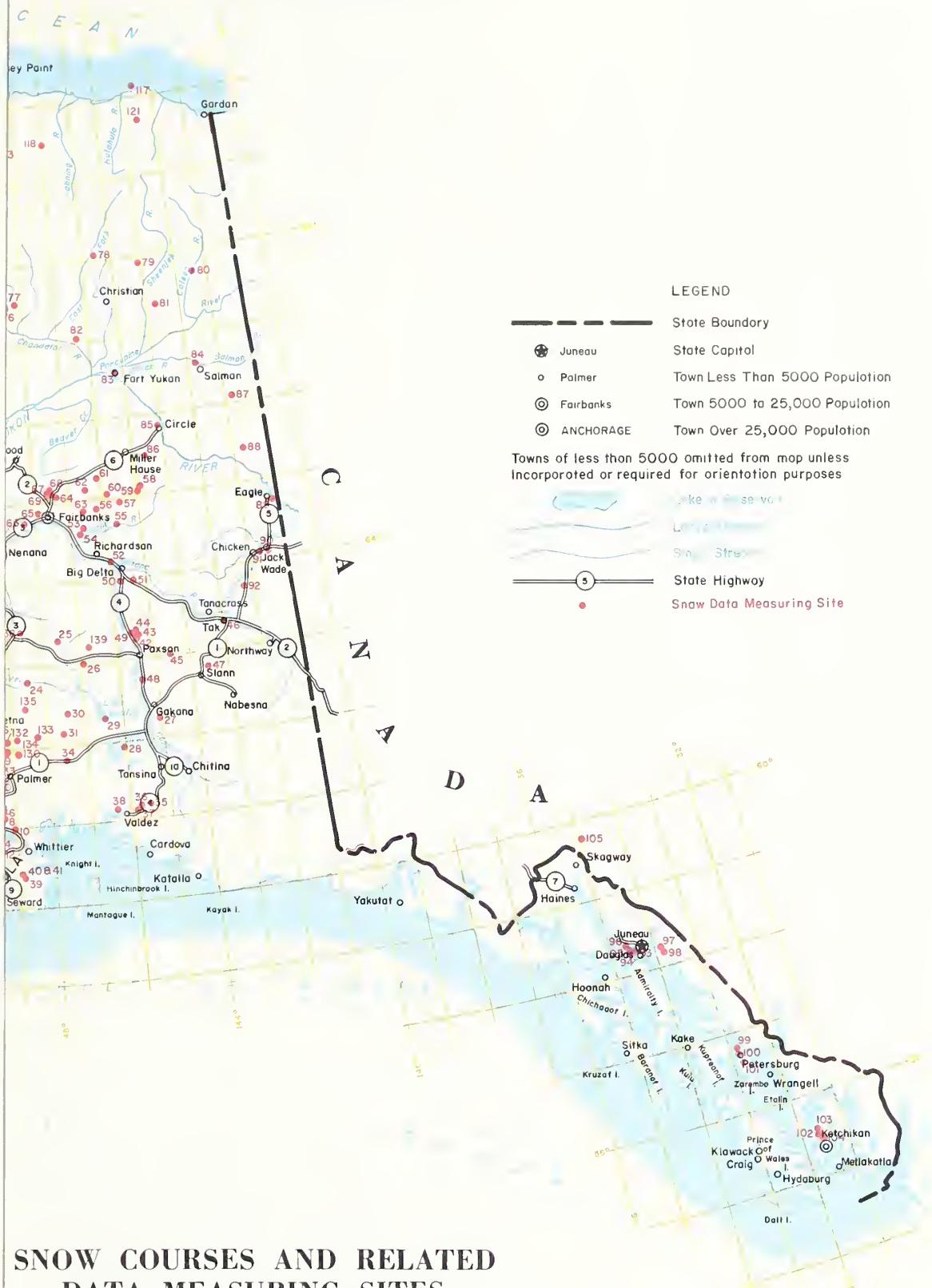
*Windblown courses

a - aerial marker reading e - estimated

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR		LAST YEAR		HISTORICAL AVERAGE +			
NAME	Number	Elevation	Date of Survey	Snow Depth (inches)	Water Content (inches)	Snow Depth (inches)	Water Content (inches)	Snow Depth (inches)	Water Content (inches)	Years of Previous Record
WYOMING PRECIPITATION GAGES					INCREMENT SINCE LAST READING			ACCUMU- LATIVE TOTAL		
			DATE							
<u>BROOKS RANGE:</u>										
Atigun Camp	125	3400	9/24/79 1/31 2/29 4/2		INITIAL	READING			3.4 3.8 4.1	
Atigun Pass	123	4900	9/24/79 1/31 2/29 4/2		INITIAL	READING			6.7 7.9 8.4	
Chandalar Shelf	122	3400	9/24/79 1/30 2/29 4/2		INITIAL	READING			2.7 4.3 4.7	
<u>NORTH SLOPE:</u>										
Barrow	115	15	10/1/79 10/15 11/1 11/15 12/1 12/15 1/2 1/15 2/1 2/15 3/1 3/15		INITIAL	READING			0.3 0.6 0.7 1.1 1.4 1.8 1.8 2.1 2.6 2.7 2.9	
Barter Island	117	15	9/6/79		INITIAL	READING				
Jago River	121	550	9/6/79		INITIAL	READING				
Kavik River	118	200	9/6/79		INITIAL	READING				
Meade River	116	200	9/1/79 1/2 3/25		INITIAL	READING			3.4 4.4	
Prudhoe Bay	114	30	9/27/79 11/7 12/4 1/1 1/8 3/1		INITIAL	READING			1.7 3.1 4.1 5.2 5.8	
Sagwon	113	1000	9/27/79		INITIAL	READING				
Toolik River	112	3100	9/30/79		INITIAL	READING				
<u>TANANA-CHENA:</u>										
Murphy Dome	New		10/25/79 12/18 1/28 2/26 3/25		INITIAL	READING			1.2 1.8 2.0 2.4	

+ FOR PERIOD OF RECORD



SNOW COURSES AND RELATED DATA MEASURING SITES

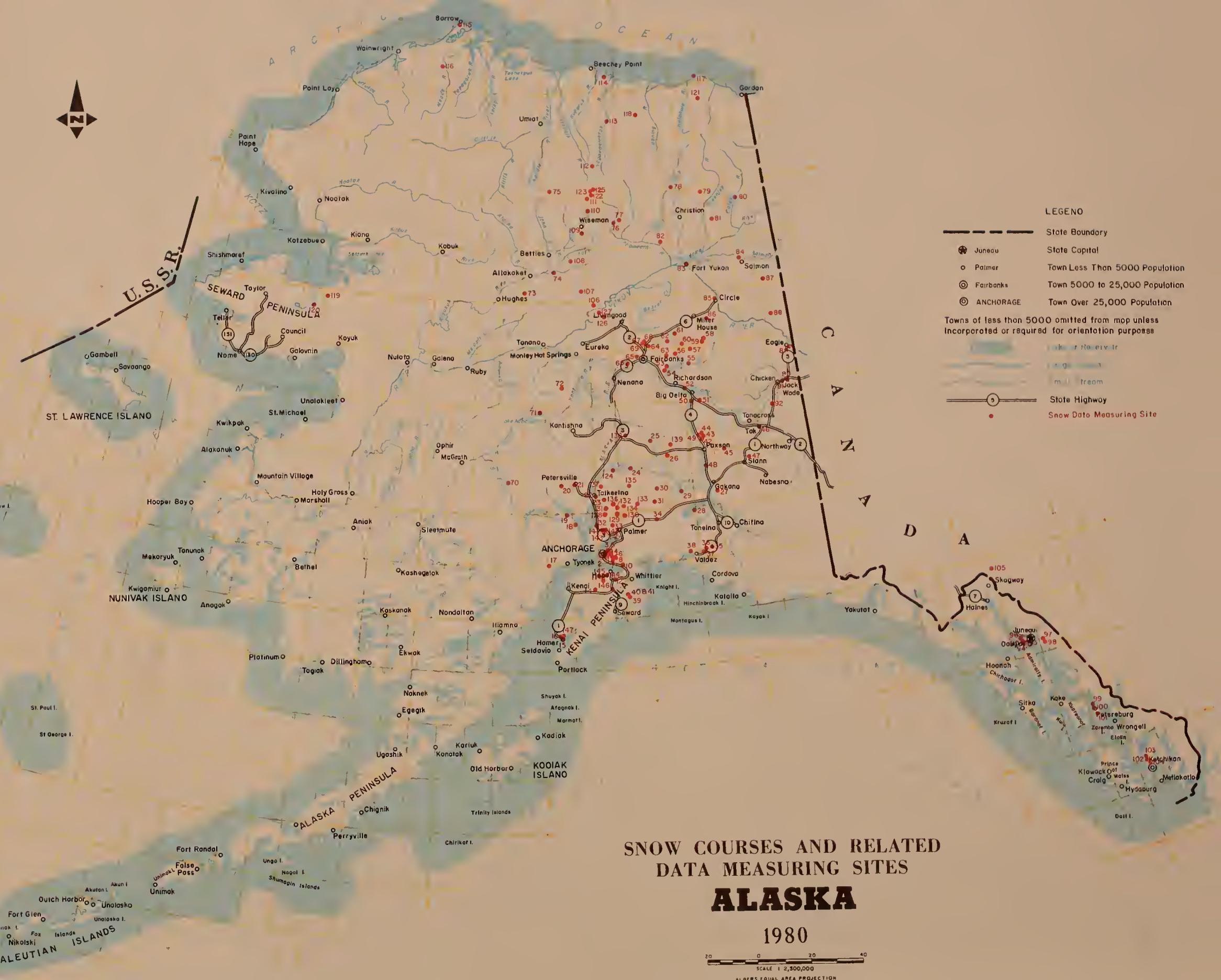
ALASKA

1980

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ALBERS EQUAL AREA PROJECTION

M7-EN-22020
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1960 JOURNAL OF CLIMATE



INDEX OF ALASKA SNOW COURSES

MAP NO.	COURSE NAME	COURSE NO. *	ELEV.	LAT.	LONG.	MEAS. DATES *	MEAS. BY *	MAP NO.	COURSE NAME	COURSE NO. *	ELEV.	LAT.	LONG.	MEAS. DATES *	MEAS. BY *
1	Arctic Valley #1	49MM1	500	61°13'N	149°40'W	2,3,4,5	c	76	Ghandalar Lake	48SS1A	2040	67°30'N	148°30'W	3,4	a
2	Arctic Valley #2	49MM2	1000	61°13'N	149°37'W	2,3,4,5	c	77	Squaw Lake	48SS2a	2150	67°33'N	148°15'W	3,4	a
3	Arctic Valley #3	49MM3	2030	61°14'N	149°35'W	2,3,4,5	c	78	Arctic Village	45TT1A	2300	68°05'N	145°35'W	3,4	a
4	Arctic Valley #4	49MM4	2330	61°14'N	149°33'W	2,3,4,5	c	79	Koness Lake	44SS1A	1790	67°55'N	144°08'W	3,4	a
5	Arctic Ski Bowl	49MM5	3000	61°15'N	149°31'W	2,3,4,5	c	80	Coleen River	42SS1A	1100	67°44'N	142°28'W	3,4,7	a
6	Ship Creek	49MM7PS	1750	61°08'N	149°28'W	2,3,4,5	a	81	Vundik Lake	43SS1a	950	67°23'N	143°45'W	3,4	a
7	Indian Pass	49MM8APST	2350	61°05'N	149°29'W	2,3,4,5	a	82	Venetie	46SS1A	610	67°03'N	146°25'W	3,4,7	a
8	Bird Creek	49MM6A	2350	61°06'N	149°20'W	2,3,4,5,7	a	83	Fort Yukon	45RR1AM	430	66°35'N	145°15'W	3,4,7	a
9	South Campbell Creek	49MM11	1200	61°08'N	149°42'W	2,3,4,5	a	84	Black River	42RR1A	650	66°36'N	142°45'W	3,4,7	a
10	Mt. Alyeska	49LL1S	1200	60°57'N	149°05'W	2,3,4,5	a,b	85	Circle City	44QQ3A	600	65°50'N	144°05'W	3,4,7	a
11	Bertha Creek	49LL2	850	60°45'N	149°51'W	2,3,4,5	a	86	Circle Hot Springs	44QQ5	860	65°29'N	144°39'W	3,4	a
12	Kenai Summit	49LL3	1390	60°40'N	149°28'W	2,3,4,5	a	87	Dempsey Greek	41RR2A	950	66°06'N	141°48'W	3,4	a
13	Moose Pass	49LL4	700	60°31'N	149°30'W	2,3,4,5	a	88	Nation River	41QQ1a	3050	65°25'N	141°40'W	3,4	f
14	Jean Lake	50LL1	620	60°31'N	150°11'W	2,3,4,5	a	89	Eagle Village	41PP1A	900	64°08'N	141°08'W	3,4,7	f
15	Bridge Creek (UP)	51KK1	1300	59°42'N	151°28'W	3,4,5	a	90	Boundary	41PP3A	3300	64°05'N	141°27'W	3,4	f
16	Bridge Creek (LO)	51KK2	1100	59°40'N	151°32'W	3,4,5	a	91	Chicken Airstrip	41PP2A	1650	64°05'N	141°45'W	3,4,7	f
17	McArthur	52LL1A	120	61°00'N	152°00'W	2,3,4,5	a,c	92	Mt. Fairplay	42001a	3100	63°42'N	142°17'W	3,4,5	f
18	Alexander Lake	50MM1A	200	61°45'N	150°54'W	2,3,4,5	a,c	93	Douglas Ski Bowl	34JJ1	1640	58°16'N	134°27'W	3,4,5	b
19	Skwentna	51MM1A	160	61°58'N	151°12'W	2,3,4,5	a,c	94	Cropley Lake	34JJ2	1650	58°16'N	134°31'W	1,2,3,4	b
20	Ghlatna Lake	51NN1A	1650	62°31'N	151°29'W	2,3,4,5	a,c	95	Eagle Grest	34JJ3	1000	58°17'N	134°32'W	1,2,3,4	b
21	Peters Hills	50NN1a	2010	62°31'N	150°57'W	2,3,4,5	a,c	96	Fish Creek	34JJ4	500	58°19'N	134°33'W	1,2,3,4	b
22	Talkeetna	50NN2	350	62°18'N	150°05'W	2,3,4,5	a,c	97	Upper Long Lake	33JJ2aS	1000	58°11'N	133°53'W	3,4,5,6,7	e
23	Bald Mtn. Lake	49NN1A	2150	62°15'N	149°45'W	2,3,4,5	a,c	98	Speel River	33JJ3A	280	58°09'N	133°43'W	3,4,5,6,7	e
24	Fog Lakes	48NN2A	2120	62°47'N	148°29'W	2,3,4,5	a,c	99	Petersburg Reservoir	32HH1	550	56°47'N	132°56'W	2,3,4,5	b
25	Monahan Flat	47001APST	2710	63°18'N	147°39'W	2,3,4,5	a,c	100	Mitkof Island	32HH2	1050	56°46'N	132°56'W	2,3,4,5	h
26	Clearwater Lake	46NN1A	3100	62°59'N	146°58'W	2,3,4,5	a,c	101	Crystal Lake	32HH3	1375	56°36'N	132°50'W	2,3,4,5	b
27	Sanford River	45NN2A	2280	62°13'N	145°04'W	2,3,4,5	a,c	102	Harriet Top	31GG1	2000	55°29'N	131°37'W	3,4,5	b
28	St. Anne Lake	46MM1A	1990	61°53'N	146°03'W	2,3,4,5	a,c	103	Hunt Saddle	31GG2	1500	55°30'N	131°37'W	3,4,5	b
29	Lake Louise	46NN2A	2400	62°17'N	146°30'W	2,3,4,5	a,c	104	Lake Shore	31GG3	660	55°29'N	131°36'W	3,4,5	b
30	Oshetna Lake	47NN1A	2950	62°23'N	147°29'W	2,3,4,5	a,c	105	Log Cabin (B.C.)	34KK1	2880	59°45'N	134°58'W	3,4,5	e
31	Little Nelchina	47NN2a	4160	62°07'N	147°36'W	2,3,4,5	a,c	106	Five Mile Camp	49RR1	400	65°55'N	149°48'W	2,3,4,5	f
32	Willow Airstrip	50MM2	150	61°45'N	150°03'W	2,3,4,5	a,c	107	Thirty Mile	50RR2a	1300	66°13'N	150°15'W	2,3,4,5	f
33	Independence Mine	49MM10	3300	61°45'N	149°25'W	3,4,5	a	108	Prospect Creek	50RR1	980	66°47'N	150°45'W	2,3,4,5	f
34	Sheep Mountain	47MM2	2900	61°47'N	147°30'W	3,4,5	a	109	Coldfoot	50SS1	1000	67°16'N	150°10'W	1,2,3,4	f
35	Tsaina River	45MM4	1500	61°12'N	145°30'W	3,4,5	a	110	Dietrich Camp	49SS1A	1550	67°42'N	149°45'W	2,3,4,5	f
36	Worthington Glacier	45MM2	2400	61°10'N	145°45'W	3,4,5	a	111	Table Mountain	49SS3a	2200	67°58'N	149°45'W	2,3,4,5	f
37	Lowe River	45MM3	550	61°06'N	145°50'W	3,4,5	a	112	Toolik River	49TT1PT	3100	68°37'N	149°26'W	7	d
38	Valdez	46MM2	50	61°08'N	146°20'W	2,3,4,5	a	113	Sagwon	48UU1P	1000	69°26'N	148°34'W	7	d
39	Wolverine Glacier (A)	48LL1	2130	60°23'N	148°54'W	1,2,4,5,6,7	g	114	Prudhoe Bay	48VV1P	30	70°15'N	148°30'W	7	a
40	Wolverine Glacier (B)	48LL2	3610	60°25'N	148°55'W	2,3,4,5,6,7	g	115	Barrow	56WW1P	15	71°20'N	156°40'W	7	i
41	Wolverine Calcier C	48LL3	4430	60°25'N	148°55'W	1,2,4,6,7	g	116	Meade River	57VV1P	200	70°29'N	157°25'W	7	i
42	Gulkana Glacier A	45006	4590	63°15'N	145°29'W	2,3,4,5,6,7	g	117	Barter Island	43VV1P	15	70°08'N	143°37'W	7	h
43	Culkana Glacier 8	45007	5480	63°17'N	145°26'W	2,3,4,5,6,7	g	118	Kavik River	47UU1P	200	69°30'N	147°00'W	7	h
44	Culkana Glacier C	45008	6360	63°19'N	145°29'W	5,6,7	g	119	Candle	61QQ1P	20	66°55'N	161°56'W	3,4	a,f
45	Mankomen Lake	44NN1	3050	63°00'N	144°32'W	2,3,4,5	a	120	Kugruk River	62QQ1P	225	65°40'N	162°27'W	3,4	a,f
46	Tok Junction	43001	1650	63°18'N	143°00'W	2,3,4,5	a	121	Jago River	43UU1P	550	69°42'N	143°36'W	7	h
47	Mentasta Pass	43NN1	2430	62°51'N	143°30'W	2,3,4,5	a	122	Chandalar Shelf	49TT2P	3400	68°05'N	149°29'W	7	d
48	Haggard Creek	45NN1A	2540	62°42'N	145°28'W	2,3,4,5	a	123	Atigun Pass	49TT3SP	4900	68°08'N	149°35'W	7	d
49	Fielding Lake	45001A	3000	63°18'N	145°33'W	2,3,4,5	a	124	Devils Canyon	49NN2a	1350	62°49'N	149°18'W	2,3,4,5	a,c
50	Ft. Creely	45005	1420	63°57'N	145°45'W	1,2,3,4,5,7	a	125	Atigun Camp	49TT4P	3400	68°10'N	149°26'W	7	d
51	Granitic Creek	45004S	1240	63°57'N	145°24'W	1,2,3,4,5,7	a	126	H						

LEGEND

* Numerals refer to specific dates:

Numerals	1 = January	1
	2 = February	1
	3 = March	1
	4 = April	1
	5 = May	1
	6 = June	1
	7 = Special dates	

** Letters refer to Agency that
secures the snow survey,

- a. - Soil Conservation Service
 - b. - Forest Service
 - c. - U.S. Army Corps. of Engineers
 - d. - U.S. Army Cold Regions Research and Engineering Lab
 - e. - Alaska Power Administration
 - f. - Bureau of Land Management
 - g. - U.S. Geological Survey
 - h. - U.S. Fish and Wildlife Service
 - i. - Naval Arctic Research Lab

*** Letters following the snow course number refer to:

- A. - Snow Course and Aerial Stadia Marker
 - a. - Aerial Stadia Marker only
 - P. - Precipitation Storage Gage
 - S. - Snow Pillow
 - T. - Radio Telemetered

AGENCIES AND ORGANIZATIONS COOPERATING IN ALASKA SNOW SURVEYS

CANADA

Department of Indian and Northern Affairs, Northern
Natural Resources and Environment, Yukon Territory

FEDERAL

Department of Agriculture
Forest Service
Institute of Northern Forestry
Tongass National Forest
Chugach National Forest
Soil Conservation Service

Department of Commerce
NOAA National Weather Service

Department of Defense
U.S. Army Corps of Engineers
U.S. Army Cold Regions Research and Engineering Laboratory

Department of Interior
Bureau of Land Management
Geological Survey
Alaska Power Administration
Fish and Wildlife Service

STATE

Alaska Department of Military Affairs, Division of Emergency Services
Alaska Department of Fish and Game
Alaska Department of Transportation
Alaska Department of Natural Resources, Division of Parks
Alaska Association of Soil Conservation Sub-districts
Alaska Soil Conservation District
University of Alaska
Alaska Experiment Station
Geophysical Institute
Alaska Department of Natural Resources, Division of Forest Land and Water
Alaska Department of Natural Resources, Division of Geological and Geophysical Surveys

MUNICIPALITIES

Municipality of Anchorage

PRIVATE

Mt. Alyeska Resort, Inc.
NANA Regional Corporation



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*"The Conservation of Water begins
with the Snow Survey."*